

CLAIM AMENDMENTS

Claim 1. (Currently Amended) A plasticized vinyl chloride composition, comprising:

- (a) about 100 parts by weight of at least one vinyl chloride resin;
- (b) about 10 to 230 parts by weight of a primary plasticizer compounded with said at least one vinyl chloride resin, wherein said plasticizer comprises a fatty acid product derived from a vegetable oil having at least 80% by weight of unsaturated fatty acids, wherein said unsaturated fatty acids are substantially fully esterified with a monool or a polyol, and said esterified unsaturated fatty acids have been substantially fully epoxidized;
wherein, in said vegetable oil derived plasticizer,
 - (1) said fatty acid product is derived from direct esterification of fatty acids of said vegetable oil with a monool or a polyol;
 - (2) said fatty acid product is derived from transesterification of said vegetable oil with monoools or polyols;
 - (3) said fatty acid product is derived from said vegetable oil interesterified with another vegetable oil having a higher degree of unsaturation; and/or
 - (4) said fatty acid product is derived from [[a]] fatty acids from said vegetable oil esterified with a monool and interesterified with a polysaccharide carboxylic acid ester.

Claim 2. (Previously Presented) The composition of claim 1, wherein said plasticized vinyl chloride composition is essentially free of dioctyl phthalate.

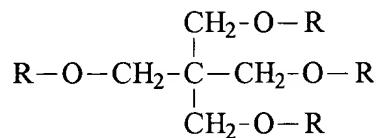
Claim 3. (Original) The composition of claim 1, wherein when said alcohol is a polyol and said fatty acids derived from said vegetable oil are substantially randomly positioned on the hydroxyl sites of said polyol.

Claim 4. (Currently Amended) The composition of claim 1, wherein said vegetable oil is selected from the group consisting of,
canola oil (iodine value about 100-115),

corn oil (iodine value about 118-128),
linseed oil (iodine value about 170-200),
rapeseed oil (iodine value about 100-115),
safflower oil (iodine value about 140-150),
soybean oil (iodine value about 120-143),
sunflower oil (iodine value about 125-140),
tall oil (iodine value about 140-190), and
tung oil (iodine value about 180) [[(and mixtures of derivatives thereof)]] and
mixtures thereof.

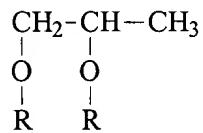
Claim 5. (Currently Amended) The composition of claim 1, wherein said plasticizer [[composition]] is derived from a vegetable oil having an iodine value above about 100.

Claim 6. (Currently Amended) The composition of claim 1, wherein said plasticizer [[composition]] is epoxidized pentaerythritol tetrasoyate having the formula:



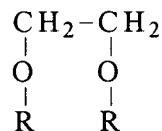
wherein R (each of the R's may be the same or different) is randomly selected from the group consisting of epoxidized linoleoyl, epoxidized oleoyl, epoxidized linolenoyl, epoxidized palmitoleoyl, [[palmitoleoyl]] non-epoxidized palmitoyl, non-epoxidized stearoyl, non-epoxidized arachidoyl, non-epoxidized behenoyl, non-epoxidized myristoyl, and non-epoxidized margaroyl.

Claim 7. (Currently Amended) The composition of claim 1, wherein said plasticizer is epoxidized propylene glycol disoyate having the formula:



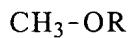
wherein R (each of the R's may be the same or different) is randomly selected from the group consisting epoxidized linoleoyl, epoxidized oleoyl, epoxidized linolenoyl, epoxidized palmitoleoyl, [[palmitoleoyl]] non-epoxidized palmitoyl, non-epoxidized stearoyl, non-epoxidized arachidoyl, non-epoxidized behenoyl, non-epoxidized myristoyl, and non-epoxidized margaroyl.

Claim 8. (Currently Amended) The composition of claim 1, wherein said plasticizer [[composition]] is epoxidized ethylene glycol disoyate having the formula:



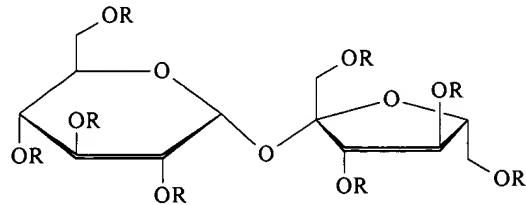
wherein R (each of the R's may be the same or different) is randomly selected from the group consisting of epoxidized linoleoyl, epoxidized oleoyl, epoxidized linolenoyl, epoxidized palmitoleoyl, [[palmitoleoyl]] non-epoxidized palmitoyl, non-epoxidized stearoyl, non-epoxidized arachidoyl, non-epoxidized behenoyl, non-epoxidized myristoyl, and non-epoxidized margaroyl.

Claim 9. (Currently Amended) The composition of claim 1, wherein said plasticizer [[composition]] is a mixture of epoxidized methyl soyates [[soyate]] having the formula:



wherein R is randomly selected from the group consisting of epoxidized linoleoyl, epoxidized oleoyl, epoxidized linolenoyl, epoxidized palmitoleoyl, [[palmitoleoyl]] non-epoxidized palmitoyl, non-epoxidized stearoyl, non-epoxidized arachidoyl, non-epoxidized behenoyl, non-epoxidized myristoyl, and non-epoxidized margaroyl.

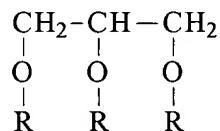
Claim 10. (Currently Amended) The composition of claim 1, wherein said plasticizer [[composition]] is epoxidized sucrose octasoyate having the formula:



wherein R (each of the R's may be the same or different) is selected from the group consisting of epoxidized linoleoyl, epoxidized oleoyl, epoxidized linolenoyl, epoxidized palmitoleoyl, [[palmitoleoyl]] non-epoxidized palmitoyl non-epoxidized stearoyl, non-epoxidized arachidoyl, non-epoxidized behenoyl, non-epoxidized myristoyl, and non-epoxidized margaroyl.

Claim 11. (Currently Amended) The plasticizer [[composition]] of claim 10, wherein each R is randomly selected from said group.

Claim 12. (Currently Amended) The composition of claim 1, wherein said plasticizer [[composition]] is the epoxidized product of a first vegetable oil interesterified with a second vegetable oil, and having the formula:



wherein R (each of the R's may be the same or different) is randomly selected from the group consisting of epoxidized linoleoyl, epoxidized oleoyl, epoxidized linolenoyl, epoxidized palmitoleoyl, [[palmitoleoyl]] non-epoxidized palmitoyl, non-epoxidized stearoyl, non-epoxidized arachidoyl, non-epoxidized behenoyl, non-epoxidized myristoyl, and non-epoxidized margaroyl.

Claim 13. (Currently Amended) The plasticizer [[composition]] according to Claim 12, wherein said first vegetable oil has an iodine value greater than 100 and the second vegetable oil has an iodine value greater than the first vegetable oil.

Claim 14. (Currently Amended) The plasticizer [[composition]] of claim 12, wherein said first vegetable oil is soybean oil, and said second vegetable oil is linseed oil.

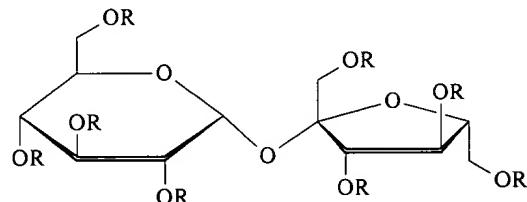
Claim 15. (Cancelled)

Claim 16. (Cancelled)

Claim 17. (Cancelled)

Claim 18. (Cancelled).

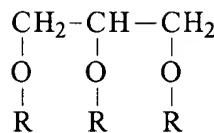
Claim 19. (Currently Amended) Epoxidized sucrose octasoyate having the formula:



wherein R (each of the R's may be the same or different) is selected from the group consisting of epoxidized linoleoyl, epoxidized oleoyl, epoxidized linolenoyl, epoxidized palmitoleoyl, [[palmitoleoyl]] non-epoxidized palmitoyl, non-epoxidized stearoyl, non-epoxidized arachidoyl, non-epoxidized behenoyl, non-epoxidized myristoyl, and non-epoxidized margaroyl.

Claim 20. (Previously Presented) The composition of claim 19, wherein each R is randomly selected from said group.

Claim 21. (Currently Amended) The epoxidized product of a first vegetable oil interesterified with a second vegetable oil having the formula:



wherein R (each of the R's may be the same or different) is randomly selected from the group consisting of epoxidized linoleoyl, epoxidized oleoyl, epoxidized linolenoyl, epoxidized palmitoleoyl, [[palmitoleoyl]] non-epoxidized palmitoyl, non-epoxidized stearoyl, non-epoxidized arachidoyl, non-epoxidized behenoyl, non-epoxidized myristoyl, and non-epoxidized margaroyl.

Claim 22. (Original) The composition of claim 21, wherein said first vegetable oil is soybean oil, and said second vegetable oil is linseed oil.

Claim 23. (Original) A plasticized vinyl chloride composition, comprising:

- (a) about 100 parts by weight of at least one vinyl chloride resin;
- (b) about 10 to 100 parts by weight of a plasticizer compounded with said at least one vinyl chloride resin, wherein said plasticizer is epoxidized pentaerythritol tetrasoyate; and
- (c) about 1-3 parts thermal stabilizer compounded with said at least one vinyl chloride resin and said plasticizer.

Claim 24. (Original) A plasticized vinyl chloride composition, comprising:

- (a) about 100 parts by weight of at least one vinyl chloride resin;
- (b) about 10 to 100 parts by weight of a plasticizer compounded with said at least one vinyl chloride resin, wherein said plasticizer is epoxidized propylene glycol disoyate; and
- (c) about 1-3 parts thermal stabilizer compounded with said at least one vinyl chloride resin and said plasticizer.

Claim 25. (Original) A plasticized vinyl chloride composition, comprising:

- (a) about 100 parts by weight of at least one vinyl chloride resin;

- (b) about 10 to 100 parts by weight of a plasticizer compounded with said at least one vinyl chloride resin, wherein said plasticizer is epoxidized ethylene glycol disoyate; and
- (c) about 1-3 parts thermal stabilizer compounded with said at least one vinyl chloride resin and said plasticizer.

Claim 26. (Original) A plasticized vinyl chloride composition, comprising:

- (a) about 100 parts by weight of at least one vinyl chloride resin;
- (b) about 10 to 100 parts by weight of a plasticizer compounded with said at least one vinyl chloride resin, wherein said plasticizer is epoxidized methyl soyate; and
- (c) about 1-3 parts thermal stabilizer compounded with said at least one vinyl chloride resin and said plasticizer.

Claim 27. (Original) A plasticized vinyl chloride composition, comprising:

- (a) about 100 parts by weight of at least one vinyl chloride resin;
- (b) about 10 to 100 parts by weight of a plasticizer compounded with said at least one vinyl chloride resin, wherein said plasticizer is epoxidized sucrose octasoyate; and
- (c) about 1-3 parts thermal stabilizer.

Claim 28. (Original) A plasticized vinyl chloride composition, comprising

- (a) about 100 parts by weight of at least one vinyl chloride resin; and
- (b) about 10 to 100 parts by weight of a plasticizer compounded with said at least one vinyl chloride resin, wherein said plasticizer is the epoxidized product of a first ester interesterified with a second ester; and
- (c) about 1-3 parts thermal stabilizer compounded with said at least one vinyl chloride resin and said plasticizer.

Claim 29. (Original) A plasticized vinyl chloride composition, comprising

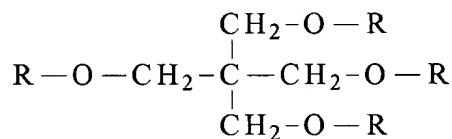
- (a) about 100 parts by weight of at least one vinyl chloride resin; and
- (b) about 10 to 100 parts by weight of a plasticizer compounded with said at

least one vinyl chloride resin, wherein said plasticizer is the epoxidized product of a first vegetable oil interesterified with a second vegetable oil; and

(c) about 1-3 parts thermal stabilizer compounded with said at least one vinyl chloride resin and said plasticizer.

Claim 30. (Previously Presented) The composition of claim 29, wherein said first vegetable oil is soybean oil, and said second vegetable oil is linseed oil.

Claim 31. (New) The composition of claim 1, wherein said plasticizer comprises a mixture of epoxidized pentaerythritol tetrasoyates having the formula:

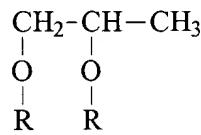


wherein R (each of the R's may be the same or different) is randomly selected from the group consisting of:

(i) substantially fully epoxidized unsaturated fatty acids derived from a vegetable oil; and

(ii) non-epoxidized saturated fatty acids derived from a vegetable oil; wherein said vegetable oil has greater than about 80% unsaturated fatty acids and/or an iodine number above about 100.

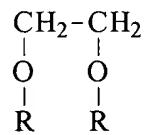
Claim 32. (New) The composition of claim 1, wherein said plasticizer comprises a mixture of epoxidized propylene glycol disoyates having the formula:



wherein R (each of the R's may be the same or different) is randomly selected from the group consisting of epoxidized linoleoyl, epoxidized oleoyl, epoxidized linolenoyl, epoxidized palmitoleoyl, non-epoxidized palmitoyl, non-epoxidized stearoyl, non-

epoxidized arachidoyl, non-epoxidized behenoyl, non-epoxidized myristoyl, and non-epoxidized margaroyl.

Claim 33. (New) The composition of claim 1, wherein said plasticizer comprises a mixture of epoxidized ethylene glycol disoyates having the formula:



wherein R (each of the R's may be the same or different) is randomly selected from the group consisting of epoxidized linoleoyl, epoxidized oleoyl, epoxidized linolenoyl, epoxidized palmitoleoyl, non-epoxidized palmitoyl, non-epoxidized stearoyl, non-epoxidized arachidoyl, non-epoxidized behenoyl, non-epoxidized myristoyl, and non-epoxidized margaroyl.